

**OCONEE COUNTY PROCUREMENT OFFICE
415 S. PINE STREET
WALHALLA, SC 29691**

Tronda C. Popham, CPPB, Procurement Director
Katie Brown, Buyer

Telephone: 864-638-4141
Fax: 864-638-4142

ADDENDUM NO. 5

BID NO. 19-04

**New Electrical Service for Mobile Mine Duty Crushing Plant
for Oconee County Rock Quarry**

Bid Date remains: Thursday, September 19, 2019 @ 2:00PM

Please make the following changes:

Remove E-1 and E-2 from the plan / drawing document and replace with E-1 Addendum Revisions 9/13/19 and E-2 Addendum Revisions 9/13/19 (attached with this Addendum No. 5)

This Addendum #5 includes answers to the following question(s) and/or clarification(s) from Oconee County. **A signed copy of this Addendum #5 must also be returned with your bid.**

1. **Question:** Who is responsible for installing the insulation in the container?
Answer: The Contractor will install the insulation in the container as indicated on the drawings.
2. **Question:** Who is responsible for installing the container?
Answer: The County will install the container, including the pad and required anchoring.
3. **Question:** Who is responsible for transformer pad?
Answer: The County will provide the transformer pad.
4. **Question:** What is the distance from the transformer to the container?
Answer: No more than 20'
5. **Question:** Can an E-Stop be placed on the outside of the container in lieu of the disconnect switches so that there will be enough room to mount the receptacles feeding the equipment.
Answer: The Engineer has revised drawings / specifications, see updated container layout in Addendum Revisions 9/13/19 (attached with this Addendum No. 5).

6. **Question:** Is a certified rigger required?
Answer: The contractor will be responsible for placing the switchboard within the container. The manufacturer of the switchboard may have requirements for moving the switchboard into position which the contractor should adhere to. If the contractor is not qualified or experienced in moving the switchboard as required, then he should subcontract this work out to someone who is qualified.
7. **Question:** Will the County assist in required trenching?
Answer: Prior to installing the transformer pad, the County will dig a trench from the pad location to the container for the contractor to install the transformer secondary conduits. The County will then backfill the trench. The service from the transformer over to the shipping container should be brought into the container through the wall behind the switchgear and not underneath since the container will be moveable. LB's should be provided coming out of the back wall and connected to rigid galvanized steel conduit via flexible metal conduit. Oconee County will also trench for the buried grounding around the container.
8. **Question:** Will the County accept "equal" for the Anaconda cabling?
Answer: The cable has been changed from a 3-conductor cable with a ground to a 4-conductor cable with a ground. As such the new cable is specified as a Southwire Rhinoflex cable on revised Dwg. E-1. The bidder shall submit their bid using the Southwire cabling as specified. The bidder may submit an equal as an alternate during the bids for final approval by the engineer. They will need to include the cost difference along with the specifications of the "equal" cabling.
9. **Question:** Will equals for the switchboard be allowed?
Answer: Equals by Eaton/Cutler Hammer, G.E., and Siemens are acceptable.
10. **Question:** Will you need a GC licensed contractor for this project?
Answer: No, since Oconee County is installing the shipping container, a General Contractor will not be necessary.
11. **Question:** Will the trailing cables be hard wired into the disconnects and equipment or are you wanting receptacles like we discussed in the pre-bid meeting on 7-8-19?
Answer: Per a phone conversation between Thom Moxley (Oconee County) and Chris Mahaffey (Burdette Engineering) following the meeting, the exterior disconnect switches will not be required. Receptacles shall be fed directly from the circuit breakers in the switchboard. These receptacles shall be located on the side of the shipping container and will need to be mounted in Nema 3R boxes per each circuit. All receptacles shall be Cavotec # PC6-VX05-1500 and all plugs shall be Cavotec # PC6-SX05-1500. The first 1200 Amp circuit will utilize three (3) each of the socket/plug combination factory

painted Orange, the second 1200 Amp circuit will utilize three (3) each of the socket/plug combination factory painted Yellow, the 800 Amp circuit will utilize two (2) each of the socket/plug combination factory painted Red, the first 400 Amp circuit will utilize one (1) of the socket/plug combination factory painted Blue, and the remaining 400 Amp circuit will utilize one (1) of the socket/plug combination factory painted Green. The equipment end of the cables shall be hardwired to the equipment.

12. Question: It's my understanding that MSHA requires a 7ft fence around the transformer. Please clarify if the fence installation is the contractor's responsibility.

Answer: MSHA §56.12067 Installation of transformers states, "Transformers shall be totally enclosed, or shall be placed at least 8 feet above the ground, or installed in a transformer house, or surrounded by a substantial fence at least 6 feet high and at least 3 feet from any energized parts, casing, or wiring." The transformer that Blue Ridge Electric installs should be a totally enclosed transformer with no exposed energized parts; therefore, a fence is not required. In the event that it is decided that a fence is needed, Oconee County will furnish and install the fence.

13. Question: Please provide the inside dimensions of the shipping container.

Answer: It appears that the standard width and height of shipping containers is 7'-8" wide by 7'-9" high. Per the Invitation to bid, a 20' container is being purchased by the county and the inside dimension will be 19'-5". This should be verified with the actual container that the Rock Quarry purchases.

14. Question: Is Oconee County Rock Quarry Tax Exempt?

Answer: Yes, Oconee County Rock Quarry is exempt from tax on anything used in the production of the product (rock). A tax exempt certificate will be provided to the awarded contractor.

END ADDENDUM NO. 5

Dated: 9-13-19

Please acknowledge receipt of Addendum by signing and attaching to your bid.

BY: _____ DATE: _____
(Contractor)

(Signature) (Title of Signing Officer)

SYMBOL	DESCRIPTION
	HOME RUN TO LIGHTING/SERVICE PANEL. HASH MARKS, WHEN SHOWN, INDICATE NUMBERS OF CONDUCTORS. "/> INDICATES HOT WIRE, "/> INDICATES NEUTRAL CONDUCTOR, "/> INDICATES GROUND CONDUCTOR. HOME RUN NOTE INDICATES PANEL NAME AND CIRCUIT NAME OR FEEDER TAG. CONDUCTORS SHALL BE #12 AWG IN 3/4" CONDUIT UNLESS NOTED OTHERWISE. ANY HOME RUN OR CONDUIT WITHOUT HASH MARKS IS TO CONTAIN 3 CONDUCTORS: 1 HOT, 1 NEUTRAL, AND 1 EQUIPMENT GROUND. EACH HOT CIRCUIT SHALL BE PAIRED WITH A SEPARATE NEUTRAL CONDUCTOR. SHARING OF NEUTRAL CONDUCTORS BETWEEN CIRCUITS IS NOT ALLOWED.
	EXPOSED CONDUIT
	CONDUIT RUN IN SLAB OR UNDERGROUND.
	CONDUIT RUN CONCEALED ABOVE CEILING OR IN WALLS, UNLESS NOTED OTHERWISE.
	0-10V LOW VOLTAGE DIMMER CABLE STRAPPED TO LIGHTING CONDUIT; BELDEN # 2179LP.
	CONDUIT JUNCTION IN CONDUIT OR JUNCTION BOX.
	FLEXIBLE CONDUIT
	CONDUIT TURNING UP
	CONDUIT TURNING DOWN
	JUNCTION BOX STEM INDICATES WALL MOUNTED
	LIGHTING OR SERVICE PANEL, SURFACE MOUNTED.(20BY)
	EXHAUST FAN. SEE MECHANICAL DRAWINGS FOR FAN SPECIFICATIONS.
	MOTOR, HORSEPOWER AS SHOWN.
	SAFETY DISCONNECT SWITCH. "30" INDICATES AMP RATING, "20" INDICATES FUSE SIZES, "3P" INDICATES NUMBER OF POLES, ENCLOSURE TO BE NEMA 1 UNLESS NOTED OTHERWISE (3R, 4X, ETC.) SQUARE D H300 SERIES HEAVY DUTY SAFETY SWITCH
	CONNECTION TO A SPECIFIC PIECE OF EQUIPMENT. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH PROVIDER / INSTALLER OF THE EQUIPMENT.
	#4/0 BARE COPPER GROUND TO 5/8" x 10' DRIVEN GROUND ROD UNLESS NOTED OTHERWISE. IF GROUND ROD CANNOT BE DRIVEN DUE TO ROCK, BURY GROUND ROD HORIZONTALLY AT LEAST 30 INCHES DEEP.
WIRING DEVICES	
NOTE: ALL WIRING DEVICES TO BE IVORY, WITH #302 STAINLESS STEEL COVERPLATE (FLUSH MOUNTED) UNLESS NOTED OTHERWISE ON THE DRAWING OR SPECIFICATIONS.	
SWITCH SYMBOLS	
	MANUAL MOTOR STARTER
	SINGLE POLE LIGHTING SWITCH 120-277 VOLT, 20 AMP, SPEC GRADE. LETTER ("O") DESIGNATES WHICH FIXTURES ARE CONTROLLED FROM WHICH SWITCHES WHEN MULTIPLE SWITCHES ARE USED ON ONE CIRCUIT
STRAIGHT BLADE DEVICE SYMBOLS	
	20A, 125V, 2P, 3W, NEMA 5-20R, DUPLEX RECEPTACLE. HUBBELL 5362-1 OR EQUAL. STANDARD POWER. "WP" DENOTES WEATHER RESISTANT RECEPTACLE WITH IN-USE COVER. "GR" DENOTES GFCI TYPE.
	350A, 480/277V, 3W, 5W RECEPTACLE AND PLUG COMBINATION. RECEPTACLE SHALL BE CAVOTEC # PC6-VX05-1200 AND PLUG SHALL BE CAVOTEC # PC6-SX05-1200. RECEPTACLE COLORS SHALL BE AS NOTED ON PLAN AT RIGHT.
	420A, 480/277V, 3W, 5W RECEPTACLE AND PLUG COMBINATION. RECEPTACLE SHALL BE CAVOTEC # PC6-VX05-1500 AND PLUG SHALL BE CAVOTEC # PC6-SX05-1500. RECEPTACLE COLORS SHALL BE AS NOTED ON PLAN AT RIGHT.
LIGHTING SYMBOLS:	
	4' STRIP FIXTURE
	SWITCHED FIXTURE WITH EMERGENCY LIGHTED BATTERY BACKUP. ROUTE 'HOT' SENSING CIRCUIT TO BATTERY.
	EXTERIOR WALL PACK

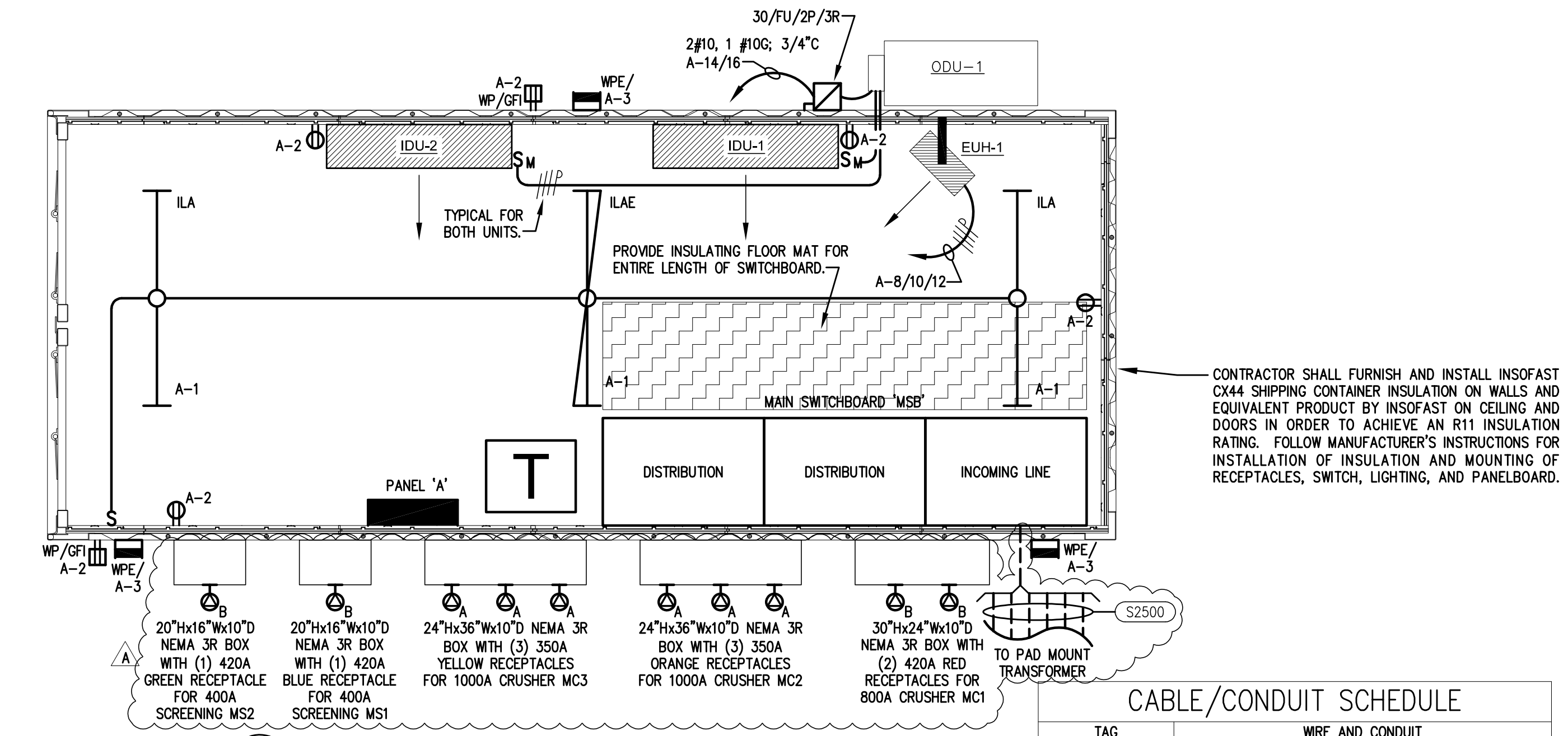
- GENERAL LIGHTING NOTES:**
- MANUFACTURERS & NUMBERS ARE LISTED TO ESTABLISH QUALITY ONLY AND NOT TO LIMIT COMPETITION. PRIOR TO BIDDING, SUBSTITUTIONS ARE ALLOWED SUBJECT TO SUBMITTAL DATA, PHOTOMETRICS & ENGINEERS APPROVAL AS REQUIRED BY SPECIFICATIONS.
 - ALL FIXTURES TO BE U.L. LABELED. ALL EXTERIOR FIXTURES SHALL HAVE U.L. WET LABEL OR DAMP LABEL AS REQUIRED BY LOCATION. CONTRACTOR SHALL VERIFY BEFORE SUBMITTING FIXTURE.
 - PROVIDE ALL MOUNTING ACCESSORIES, BAR HANGARS & HARDWARE REQUIRED.
 - EMERGENCY BATTERIES SHALL PROVIDE A MINIMUM OF 1100 LUMEN OUTPUT. BATTERIES SHALL CONTAIN INTEGRAL SENSING CIRCUIT TO ALLOW FIXTURE TO BE SWITCHED WITH AREA FIXTURES FOR NORMAL OPERATION AND ENERGIZE BATTERY POWERED FIXTURE UPON LOSS OF POWER CIRCUIT, REGARDLESS OF SWITCH POSITION. MANUFACTURER SHALL BE BODINE OR APPROVED EQUAL.

LIGHTING FIXTURE SCHEDULE

FIXTURE TYPE	FIXTURE DESCRIPTION	ACCEPTABLE MANUFACTURERS	MOUNTING HEIGHT	LAMPS	FIXTURE WATTAGE	VOLTAGE
ILA	4' LED CHANNEL STRIP LIGHT, STEEL HOUSING, FROSTED ACRYLIC LENS, WHITE FINISH, PAF, 0-10V DIMMING DRIVER	LITHONIA # ZL1D-L48-5000LM-FST-MVOLT-35K-80CRI-WH LSI # SDL-4-LED-HO-WW-UE COLUMBIA # LCL4-35-ML-EDU-PAF		NOMINAL 5000 LUMEN LED PANEL 3500K	48	UNIVERSAL VOLTAGE
ILAE	SAME AS 'ILA' ABOVE EXCEPT PROVIDED WITH EMERGENCY BATTERY BACKUP.	LITHONIA # ZL1D-L48-5000LM-FST-MVOLT-35K-80CRI-E7W-WH LSI # SDL-4-LED-HO-WW-UE COLUMBIA # LCL4-35-ML-EDU-PAF-ELL14		NOMINAL 5000 LUMEN LED PANEL 3500K	48	UNIVERSAL VOLTAGE
WPE	EXTERIOR LED WALL PACK WITH DIE-CAST ALUMINUM GASKETED HOUSING, BOROSILICATE GLASS LENS, UNIVERSAL VOLTAGE, DARK BRONZE FINISH, PHOTOCELL, AND EMERGENCY BATTERY BACKUP.	DECO # D402-LED-60-40-U-BZ-Q-TE DURAGUARD # LWPQ-F-1X58-U-4K-Z-PC3-BU		NOMINAL 6300 LUMEN LED PANEL 4000K	60	UNIVERSAL VOLTAGE

- ABBREVIATIONS:**
- AFF ABOVE FINISHED FLOOR
 - BGR ABOVE FINISHED GRADE
 - BKR BREAKER
 - CU COPPER
 - CKT CIRCUIT
 - DWG DRAWING
 - FU FUSE
 - FWE FURNISHED WITH EQUIPMENT
 - GFI GROUND FAULT INTERRUPTER DEVICE
 - LTC LIGHTING (L)
 - MLO MAIN LUGS ONLY
 - MCB MAIN CIRCUIT BREAKER
 - MSB MAIN SWITCHBOARD
 - PH PHASE
 - PNL PANEL
 - PVC POLYVINYL CHLORIDE CONDUIT
 - RECPRT RECEPTACLE (R)
 - RGS RIGID GALVANIZED STEEL
 - SPD SURGE PROTECTIVE DEVICE
 - TYP TYPICAL
 - WP WEATHER PROOF
 - XFMR TRANSFORMER

- ELECTRICAL GENERAL NOTES:**
- INSPECT SITE PRIOR TO SUBMITTING BID. DRAWINGS ARE INTENDED TO COVER THE REQUIRED ELECTRICAL SYSTEMS. DRAWINGS MAY NOT SHOW COMPLETE OR ACCURATE DETAILS OF THE BUILDING OR SYSTEM IN EVERY RESPECT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY ADDITIONAL INFORMATION AS REQUIRED.
 - CONFORM TO THE NATIONAL ELECTRICAL CODE (2014), IBC (2015), IECC (2009), APPLICABLE NEMA, ANSI AND IEEE PUBLICATIONS, U.L. AND ADA STANDARDS AND OSHA REQUIREMENTS. COMPLY WITH LOCAL, COUNTY, STATE AND NATIONAL CODES HAVING JURISDICTION.
 - FURNISH AND INSTALL ALL MATERIALS IN A NEAT AND WORKMANLIKE FASHION. ALL MATERIALS SHALL BE NEW, WITH FIRST QUALITY AND UL LABEL.
 - VERIFY ALL DIMENSIONS AND CLEARANCES PRIOR TO INSTALLATION OF EQUIPMENT AND RACEWAYS. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF WORK WITH THAT OF ALL OTHER TRADES AS REQUIRED.
 - CONDUIT SHALL BE RIGID GALVANIZED STEEL. MINIMUM CONDUIT SIZE SHALL BE 3/4". ALL CONDUCTORS SHALL BE TYPE THHN/THWN, STRANDED 600V COPPER BUILDING WIRE. MINIMUM SIZE SHALL BE #12 AWG COPPER UNLESS NOTED. UNDERGROUND CONDUITS SHALL BE PVC SCHEDULE 40 WITH TRANSITION TO RIGID GALVANIZED STEEL FOR EXPOSED CONDUITS.
 - PROVIDE GROUNDING FOR ALL EQUIPMENT IN ACCORDANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE. GROUND SERVICE TO BUILDING STEEL, DRIVEN GROUND ROD AND COLD WATER PIPE.
 - ALL ENCLOSURES SHALL BE OF THE NEMA TYPE WHICH IS SUITABLE FOR THE APPLICATION.
 - SEAL ALL CONDUIT PENETRATIONS.
 - ALL WORK SHALL HAVE PROPER LABELING AND NAMEPLATES. ALL CIRCUITS SHALL BE LABELED AT PANELS AND BOXES AS INDICATED. ALL PANELS AND DISCONNECTS ARE TO BE PERMANENTLY MARKED WITH NAME OR EQUIPMENT SERVED. ALL PANELS ARE TO BE PROVIDED WITH TYPED PANEL SCHEDULES.
 - COORDINATE WITH ELECTRICAL UTILITY AS REQUIRED FOR SERVICE ENTRY. OCOONEE COUNTY WILL INSTALL CONCRETE PAD AND PROVIDE TRENCH FOR CONDUIT. CONTRACTOR SHALL INSTALL METER AND CONDUITS PER UTILITY REQUIREMENTS AND PAY ALL REQUIRED FEES OR CHARGES FOR SERVICES SHOWN.
 - THOROUGHLY CLEAN ALL EQUIPMENT AND SYSTEMS BEFORE PLACING IN OPERATION. RESTORE FINISHED SURFACES IF DAMAGED AND DELIVER THE ENTIRE INSTALLATION IN AN APPROVED CONDITION. INSTRUCT THE OWNERS' PERSONNEL IN THE PROPER OPERATION AND MAINTENANCE OF THE SYSTEMS. FURNISH TO THE OWNER THREE SETS OF OPERATION AND MAINTENANCE MANUALS FOR EACH SYSTEM.
 - GUARANTEE THE WORK INSTALLED FOR A PERIOD OF ONE YEAR AFTER DATE OF FINAL ACCEPTANCE. DEFECTS WHICH APPEAR AS A RESULT OF NORMAL USAGE SHALL BE REMEDIED BY THE CONTRACTOR TO THE COMPLETE SATISFACTION OF THE OWNER WITHOUT COST TO THE OWNER.
 - CONTRACTOR SHALL KEEP CURRENT A SET OF PLANS FOR THE DURATION OF CONSTRUCTION WITH ALL CHANGES TO WORK NEATLY AND ACCURATELY MARKED IN RED AND SHALL TURN OVER TO OWNER AT COMPLETION OF PROJECT.
 - ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED TO MEET SEISMIC REQUIREMENTS OF 2015 IBC.
 - GROUND-FAULT PROTECTION OF EQUIPMENT SHALL BE PROVIDED FOR 480 VOLT SERVICES FOR EACH SERVICE DISCONNECT RATED 1000 AMPS OR MORE.
 - ALL PANELBOARDS SHALL BE FURNISHED WITH COPPER BUS BARS AND A COPPER GROUNDING BUS BAR.
 - POWER WIRES AND CABLES SHALL BE INSULATED ADEQUATELY WHERE THEY PASS INTO OR OUT OF ELECTRICAL COMPARTMENTS. CABLES SHALL ENTER METAL FRAMES OF MOTORS, SPICE BOXES, AND ELECTRICAL COMPARTMENTS ONLY THROUGH PROPER FITTINGS. WHEN INSULATED WIRES, OTHER THAN CABLES, PASS THROUGH METAL FRAMES, THE HOLES SHALL BE SUBSTANTIALLY BUSHED WITH INSULATED BUSHINGS.
 - CONTRACTOR SHALL FURNISH A COMPLETE ARC-FLASH AND CIRCUIT BREAKER COORDINATION STUDY AND SET CIRCUIT BREAKERS ACCORDINGLY AND INSTALL ARC-FLASH LABELS PER N.E.C. CONTRACTOR IS RESPONSIBLE FOR GATHERING ALL INFORMATION REQUIRED FOR THE STUDIES.



CABLE/CONDUIT SCHEDULE

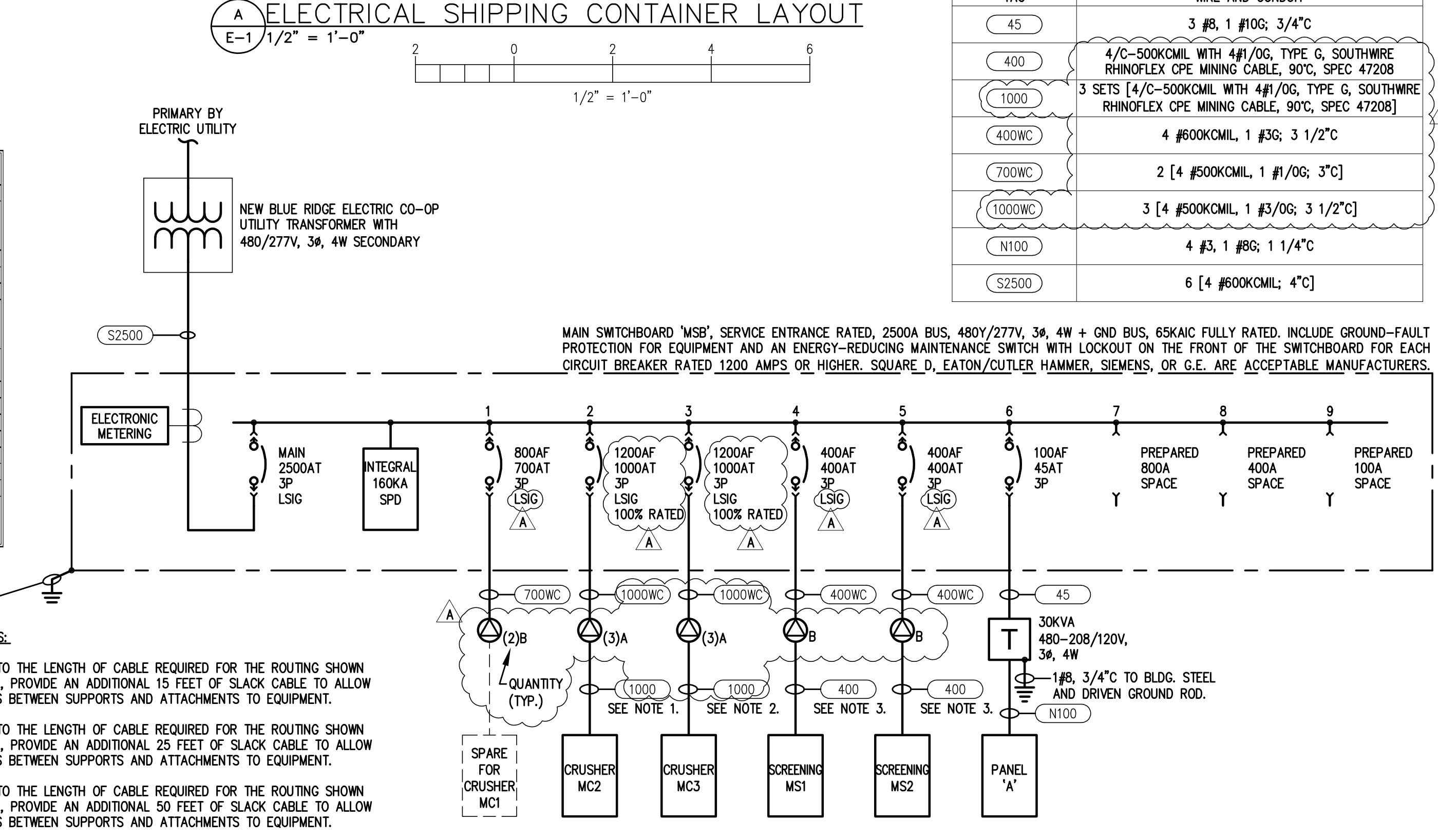
TAG	WIRE AND CONDUIT
45	3 #8, 1 #10G; 3/4"C
400	4/C-500KCMIL WITH 4#1/0G, TYPE G, SOUTHWIRE RHINOFLX CPE MINING CABLE, 90°C, SPEC 47208
1000	3 SETS [4/C-500KCMIL WITH 4#1/0G, TYPE G, SOUTHWIRE RHINOFLX CPE MINING CABLE, 90°C, SPEC 47208]
400WC	4 #600KCMIL, 1 #3G; 3 1/2"C
700WC	2 [4 #500KCMIL, 1 #1/0G; 3"C]
1000WC	3 [4 #500KCMIL, 1 #3/0G; 3 1/2"C]
N100	4 #3, 1 #8G; 1 1/4"C
S2500	6 [4 #600KCMIL; 4"C]

PANEL A

AMPS TRIP	POLES	NOTES	PHASE LOAD (VOLT-AMPS)			DESIGNATION	NOTES	AMPS TRIP
			No.	φA	φB			
20	1		1	144	1080	2 R-SHIPING CONTAINER, EXT.	1	20
20	1		3			4 SPARE	1	20
20	1		5			5 SPARE	1	20
20	1		7	1100		8		
20	1		9		1100	10 EUH-1	3	15
20	1		11			12		
20	1		13	2496		14		
20	1		15		2496	16 ODU-1	2	25
20	1		17			18 SPARE	1	20
1			19			20 SPACE	1	
1			21			22 SPACE	1	
1			23			24 SPACE	1	
1			25			26 SPACE	1	
1			27			28 SPACE	1	
1			29			30 SPACE	1	

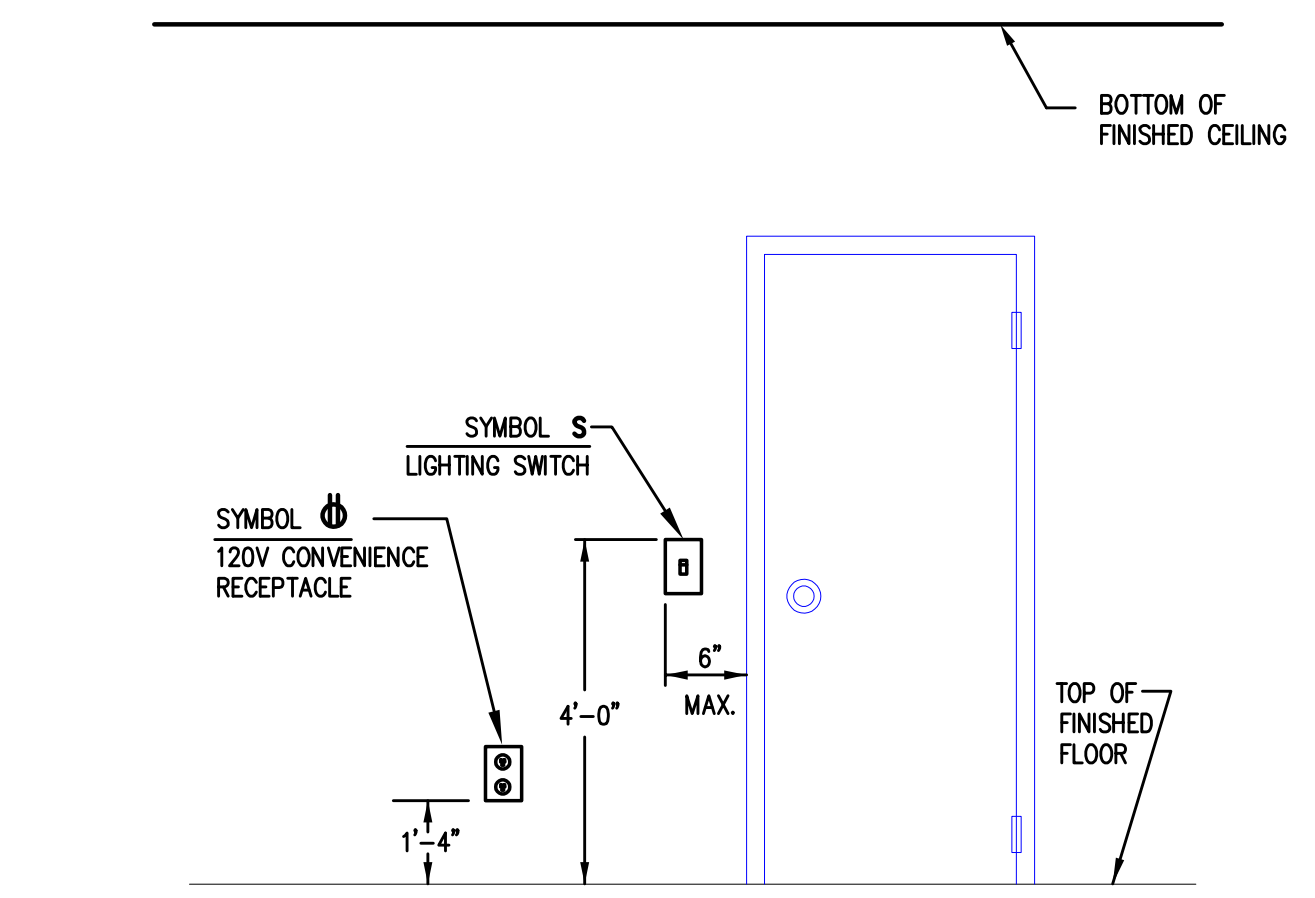
INTEGRATED EQUIPMENT RATING: 10KAIC

KVA TOTAL: 4.8 3.8 1.1 PANEL BOARD KVA LOAD TOTAL: 9.7



- SINGLE LINE NOTES:**
- IN ADDITION TO THE LENGTH OF CABLE REQUIRED FOR THE ROUTING SHOWN ON DWG. E-2, PROVIDE AN ADDITIONAL 15 FEET OF SLACK CABLE TO ALLOW FOR THE DIPS BETWEEN SUPPORTS AND ATTACHMENTS TO EQUIPMENT.
 - IN ADDITION TO THE LENGTH OF CABLE REQUIRED FOR THE ROUTING SHOWN ON DWG. E-2, PROVIDE AN ADDITIONAL 25 FEET OF SLACK CABLE TO ALLOW FOR THE DIPS BETWEEN SUPPORTS AND ATTACHMENTS TO EQUIPMENT.
 - IN ADDITION TO THE LENGTH OF CABLE REQUIRED FOR THE ROUTING SHOWN ON DWG. E-2, PROVIDE AN ADDITIONAL 50 FEET OF SLACK CABLE TO ALLOW FOR THE DIPS BETWEEN SUPPORTS AND ATTACHMENTS TO EQUIPMENT.

B SINGLE LINE DIAGRAM
E-1 NOT TO SCALE



A TYPICAL DEVICE MOUNTING HEIGHT

BURDETTE ENGINEERING

200 Regent Park Court
Greenville, SC 29607
BEI JOB NO. 19081

(864) 297-8717
(864) 297-8719 (FAX)
EMAIL: Bej@BurdetteEngr.com

ELECTRICAL SERVICE FOR OCOONEE COUNTY MOBILE MINE CRUSHING PLANT

WALHALLA, SC

PROJECT NO. 19081
DATE 9/13/19
BY LCM

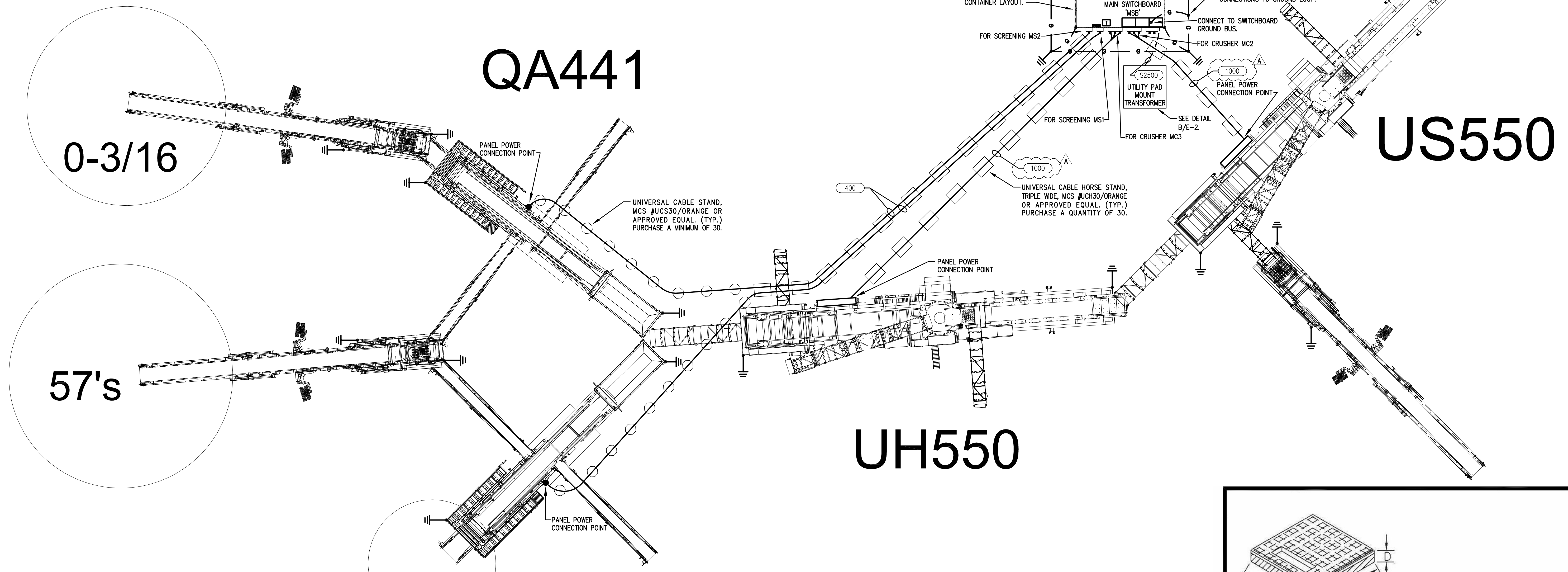
REVISION
A ADDENDUM REVISIONS

DRAWN BY
TWP/LJK

CHECKED BY
D:BB/LCM

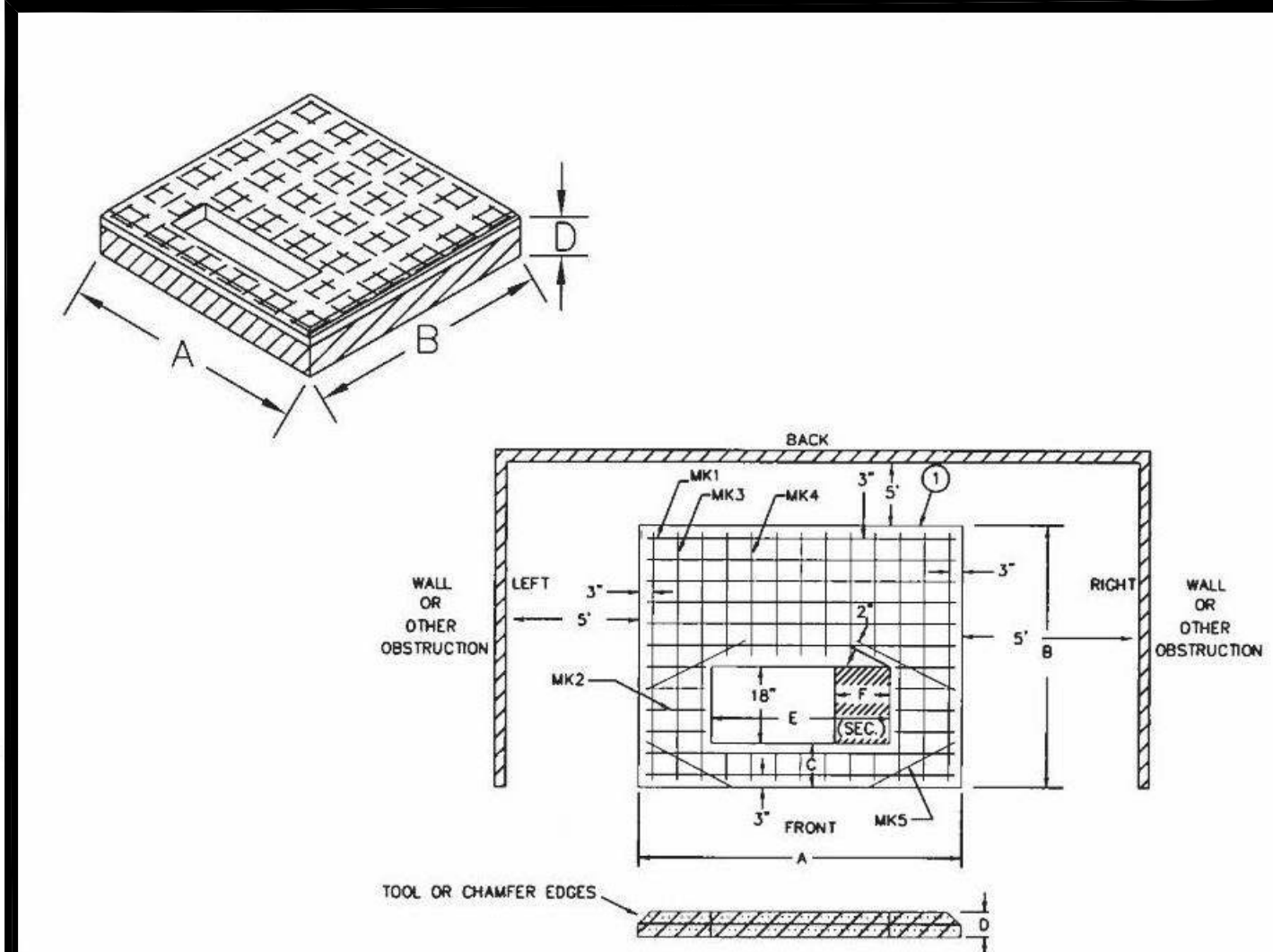
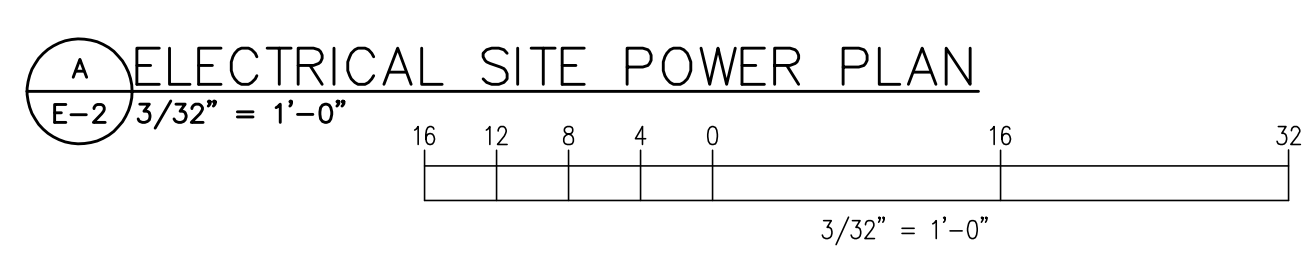
SHEET NUMBER
E-1

1 OF 3 SHEETS



TAG	WIRE AND CONDUIT
400	4/C-500KCMIL WITH 4#1/0G, TYPE G, SOUTHWIRE RHINOFLEX CPE MINING CABLE, 90°C, SPEC 47208
1000	3 SETS [4/C-500KCMIL WITH 4#1/0G, TYPE G, SOUTHWIRE RHINOFLEX CPE MINING CABLE, 90°C, SPEC 47208]
S2500	6 [4 #600KCMIL, 4°C]

- NOTES:**
- POWER CABLES ENERGIZED TO POTENTIALS IN EXCESS OF 150 VOLTS, PHASE-TO-GROUND, SHALL NOT BE MOVED WITH EQUIPMENT UNLESS SLEDS OR SLINGS, INSULATED FROM SUCH EQUIPMENT ARE USED. WHEN SUCH ENERGIZED CABLES ARE MOVED MANUALLY, INSULATED HOOKS, TONGS, ROPES, OR SLINGS SHALL BE USED UNLESS SUITABLE PROTECTION FOR PERSONS IS PROVIDED BY OTHER MEANS. THIS DOES NOT PROHIBIT PULLING OR DRAGGING OF CABLE BY THE EQUIPMENT IT POWERS WHEN THE CABLE IS PHYSICALLY ATTACHED TO THE EQUIPMENT BY SUITABLE MECHANICAL DEVICES, AND THE CABLE IS INSULATED FROM THE EQUIPMENT.
 - CONTINUITY AND RESISTANCE OF GROUNDING SYSTEMS SHALL BE TESTED IMMEDIATELY AFTER INSTALLATION, REPAIR, AND MODIFICATION; AND ANNUALLY THEREAFTER. A RECORD OF THE RESISTANCE MEASURED DURING THE MOST RECENT TESTS SHALL BE AVAILABLE AT ALL TIMES.
 - AT BOTH ENDS OF TRAILING CABLES, PROVIDE STRAIN RELIEF TO PROTECT THE CABLE FROM DAMAGE AND TO PREVENT STRAIN ON THE ELECTRICAL CONNECTIONS.
 - SURPLUS TRAILING CABLES SHALL BE STORED IN CABLE BOATS, STORED ON REELS MOUNTED ON THE EQUIPMENT, OR OTHERWISE PROTECTED FROM MECHANICAL DAMAGE.



PAD	TRANSFORMER KVA	DIMENSIONS IN INCHES					REINFORCING BARS					
		A	B	C	D	E	F	MK1	MK2	MK3	MK4	MK5
#1	45, 75, 112.5	80	80	10	B	50	20	7 #4	5 #4	5 #4	5 #4	4 #4
	150, 225	60	80	10	B	50	20	7 #4	5 #4	5 #4	5 #4	4 #4
	300, 500	96	96	10	B	60	24	9 #4	7 #4	7 #4	7 #4	4 #4
#2	750-2000	108	108	12	B	60	24	12 #4	9 #4	9 #4	7 #4	4 #4
	2500	120	120	12	B	60	24	14 #4	11 #4	11 #4	9 #4	4 #4

- NOTES:**
- CONCRETE TESTING: 4000 POUNDS PER SQUARE INCH. 4# TO BE ENCASED IN 3/4" MAXIMUM SIZE AGGREGATE WITH FIBER REINFORCEMENT.
 - REINFORCING STEEL: ASTM-A615 GRADE 60. PLACE APPROX. 6" O.C. EACH WAY AND SECURELY TIED TOGETHER.
 - MINIMUM CONCRETE COVER OVER REINFORCING STEEL: 2 INCHES UNLESS NOTED.
 - WOOD FLOOR FINISH, LEAVING NO DEPRESSIONS.
 - THE AREA IN FRONT OF THE TRANSFORMER PAD MUST REMAIN OPEN AND PROVIDE MECHANICAL ACCESS TO EQUIPMENT INSTALLED.
 - CONTACT ON SECONDARY SIDE SHOULD BE EVEN WITH CONCRETE PAD.

PAD MOUNTED TRANSFORMER SPECIFICATIONS FOR SUPPORTING CONCRETE PADS			
DATE:	REVISIONS	UNIT	
JANUARY, 1992	MEJ 3/2/00 MEJ 11/12/00	MEJ 10/8/02	UM1-6C

B UTILITY TRANSFORMER CONCRETE PAD DETAIL
E-2 NOT TO SCALE



BURDETTE ENGINEERING
200 Regent Park Court
Greenville, SC 29607
BEI JOB NO. 19081
(864) 297-8717
(864) 297-8719 (FAX)
EMAIL: Bej@BurdetteEngr.com

PROJECT NO.	DATE	BY
19081	08/16/19	LCM
REVISION	DATE	BY
A	9/13/19	LCM

**ELECTRICAL SERVICE FOR
OCONEE COUNTY
MOBILE MINE CRUSHING PLANT
WALHALLA, SC**

SHEET NUMBER
E-2
2 OF 3 SHEETS